

# Reflex Sensors

with Background Suppression

## HW12PBT3

Part Number



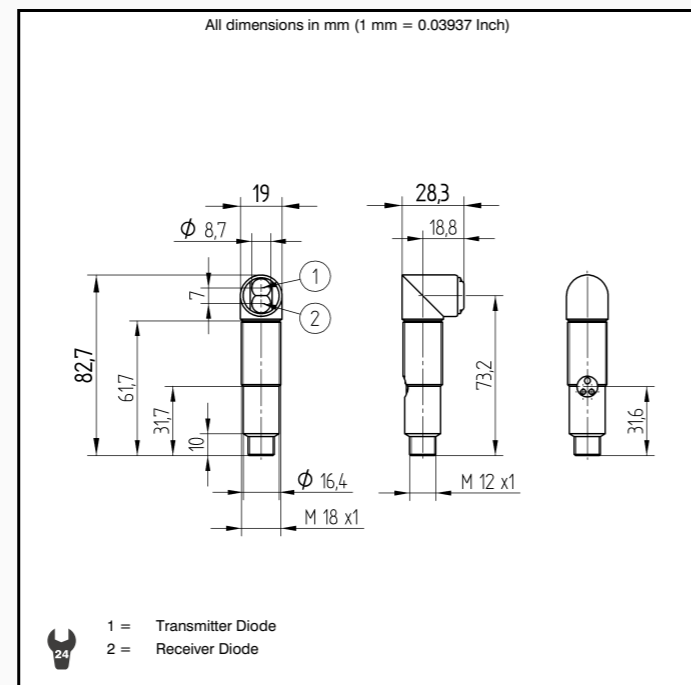
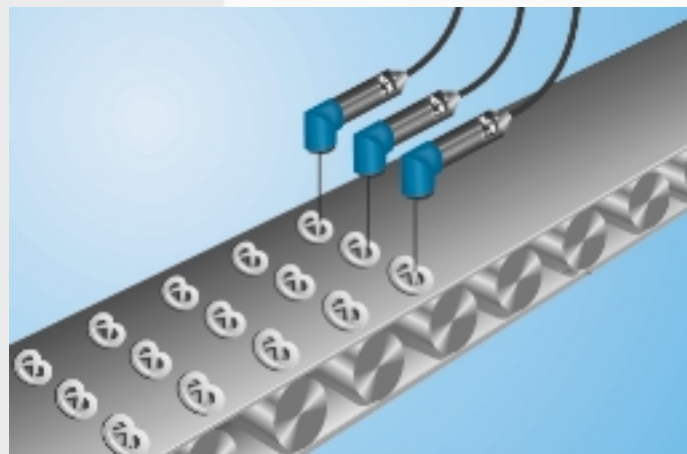
- Electronic Background Suppression
- Red Light
- Stainless Steel Housing
- Teach-In, external Teach-In



### Technical Data

Optical Data	
Range	120 mm
Switching Hysteresis	< 5 %
Light Source	Red Light
Service Life (T = +25°C)	100000 h
max. Ambient Light	10000 Lux
Light Spot Diameter	see Table 1
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (U <sub>b</sub> = 24V)	< 40 mA
Switching Frequency	600 Hz
Response Time	833 μs
Temperature Drift	< 5 %
Temperature Range	-25...60 °C
Switching Output Voltage Drop	< 2.5 V
PNP Switching Output/Switching Current	200 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Teach Mode	VT
Mechanical Data	
Adjustment	Teach-In
Housing	Stainless Steel
Full Encapsulation	yes
Protection Mode	IP 67
Connection	M 12x1
Protective Insulation, Rated Voltage	50 V

These sensors are particularly well suited for recognizing objects in front of any type of background. The color, shape and surface characteristics of the object have practically no influence on sensor switching performance.



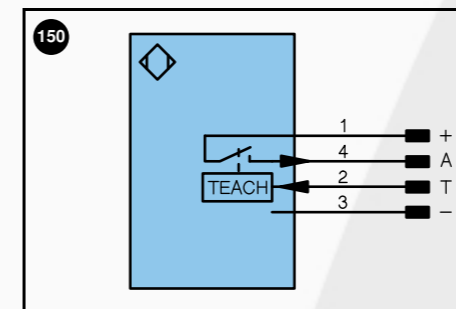
Specifications are subject to change without notice  
17/03



Table 1

Range	60 mm	120 mm
Light Spot Diameter	2,5 mm	5 mm

Plug Version	
Part Number	HW12PBT3
PNP NO	●
Connection Diagram No.	150
Control Panel No.	D 7
Suitable Plug No.	1



Legend		Wire colors according to DIN IEC 757
+	Power supply "+"	BK black
-	Power supply "0V"	BN brown
-	Power supply (AC Voltage)	RD red
A	Switching output (1,2,3...)/ NO	OG orange
A	Switching output (1,2,3...)/ NC	YE yellow
V	Contamination / Error output (NO)	GN green
V	Contamination / Error output (NC)	BU blue
E	Input (analog or digital)	VT violet
T	Teach input	GY grey
Z	Time delay (activation)	WH white
S	Shielding	PK pink
RxD	RS-232 receive path	GNYE green yellow
TxD	RS-232 send path	
U	Test input	
W	Trigger input	
O	Analog output (1,2,3,...)	
O-	Ground for the analog output	
BZ	Block discharge	
Aw	Valve output	
a	Valve control output "+"	
b	Valve control output "0V"	
SY	Synchronization	
E+	Receiver-Line	
S+	Emitter-Line	
⊕	Grounding	

### Accessories

- Mounting Clamp BSM18B
- Mounting Bracket W18

### Ctrl. Panel



- 01 = Switching Status Indicator
- 02 = Contamination Warning
- 06 = Teach Button

### Switching Distance Deviation

Typical characteristic curve based on Kodak white, 90%

